SHEET <u>1</u> OF <u>11</u>

INFORMATION DISCLOSURE CITATION IN AN **APPLICATION**

ATTY. DOCKET NO. 043876-0147

SERIAL NO. 10/705,946

APPLICANT

HANSEN, C., et al.

(PTO-1449)

FILING DATE

GROUP 2183

November 13, 2003

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	Nur	Document Number nber-Kind Codes or known)	Publication Date MM-DD-YYYY	Name of Patentee or Appli Document	cant of Cited			, Lines, When ges or Relevar Appear
((<u> </u>	US	4,658,349 A	05/14/1987	Gafken				_
1		US	4,852,098	07/25/1989	Brechard et al				
- †		us	. 4,875,161	10/17/1989	Lahti				
		US	4,949,294	08/14/1990	Wambergue				
		US	4,953,073	08/28/1990	Moussouris et a	d.			
		US	4,959,779	09/25/1990	Weber et al.			-	
		US	5,113,506	05/12/1992	Moussouris et a	ıl.			•
		υs	5,161,247	11/3/1992	Murakami et al				
		US	5,208,914	05/04/1993	Wilson et al.	-			
		us	5,231,646	07/27/1993	Health et al				
		US	5,233,690	08/03/1993	Shelock et al.				
		US	5,268,995	12/07/1993	Diefendorff et a	1.			
		US	5,347,643 A	09/13/1994	Kondo Nobukazu (et al.			
		US	5,412,728 a	05/03/1995	Besnard Christian	et al.			
Î		US	5,430,660 A	07/04/1995	John Hengeveld e	t al.			
		US	5,471,628	11/28/1995	Phillips et al.				
		ÜS	5,515,520	05/07/1996	Hatta et al.				
		US	5,533,185	07/02/1996	Lentz et al.				
		US	5,590,365	12/31/1996	lde et al.				
		ÜS	5,636,351	06/03/1997	Lee				
		US	5,742,840	04/21/1998	Hansen et al.				
		US	5,778,412 A	07/07/1998	Gafken				
		US	5,828,869	10/27/1998	Johnson et al.				
		US	5,996,057	11/30/1999	Scales, III et al				
<u>'</u>		บร	6,453,368 B2	09/17/2002	Yamamoto				
E (>		ÜS	6,657,908 B1	05/20/2003	Furuhashi				
					ENT DOCUMENTS				
EXAMINER'S INITIALS	CITE NO.		reign Patent Document ntry Codes -Number « -Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Colum Where Rel Figures Ap	evant	Yes	ranslation No
€′(•			JP 3268024	11/28/1991	Hitachi Ltd.				
			EP 0 468 820 A2	01/29/1992	Fujitsu Limited				
			WO 93/01565	01/21/1993	Seiko Epson Corporation				
			CA 1 323 451	10/19/1993	Northern Telecom Ltd.				
_1			JP 6095843	04/08/1994	IBM				ļ
		L	EP 0 651 321 A	05/03/1995	Advanced Micro Devices Inc.				<u> </u>
			EP 0 654 733 A1	05/24/1995	Hewlett-Packard		_		ļ
			JP-S60-217435	10/31/1985	Toshiba Corp.				ļ
ξ(,			WO 97/07450	02/27/1997	Microunity Systems Engineering, Inc.				
Eu	i li	EX	AMINER		3/3/06	DATE CONSID	ERED		

INFORMATION DISCLOSURE CITATION IN AN APPLICATION			ATTY. DOCKET NO. 043876-0147	SERIAL NO. 10/705,946				
			HANSEN, C., et al.					
		(PTO-1449)	FILING DATE November 13, 2003	GROUP 2183				
		OTHER ART (Includin	g Author, Title, Date, Pertinent Pages, I					
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), journal, serial, symposium, catalog, etc.), date, page published.						
ζ((·	L-1	Ide, et al., "A 320-MFLOPS CMOS Floor p. 12-21, 28 March 1993, IEEE J. OF SC		Superscalar Processors,"				
	L-2	K. Uchiyama et al., The Gmicro/500 St Micro, October 1993, p. 12-21.	perscalar Microprocessor with	n. Branch Buffers, IEEE				
	L-3	Ruby B. Lee, Realtime MPEG Video Vi IEEE (1995).	a Software Decompression on	a PA-RISC Processor,				
	L-4	Karl M. Guttag et al. "The TMS34010: /	An Embedded Microprocessor	", IEEE June 1988, p.				
	L-5		M. Awaga et al., "The μVP 64-bit Vector Coprocessor: A New Implementation of High- Performance Numerical Computation", IEEE Micro, Vol. 13, No. 5, October 1993, p.24-36.					
	L-6	Tom Asprey et al., "Performance Feature 1993), p. 22-35.	Tom Asprey et al., "Performance Features of the PA7100 Microprocessor", IEEE Micro (June 1993), p. 22-35.					
	L·7	Gove, Robert J., "The MVP: A Highly-I Compression Conf., March (1994), pp. 2		Chip," IEEE Data				
	L-8	Woobin Lee, et al., "Mediastation 5000: pp. 50-61.	Integrating Video and Audio,	'IEEE Multimedia, 1994,				
	L-9	Karl, Guttag et. al "A Single-Chip Multi Graphics & Applications, November, 19		MVP," IEEE Computer				
	L-10	TMS32OC8O (MVP) Master Processor	User's Guide, Texas Instrumer	nts, March, 1995, p. 1-33.				
	L-11	TMS320C80 (MVP) Parallel Processor 1 1-80.	User's Guide ["PP"]; Texas In	struments March 1995, p.				
	L-12	Shipnes, Julie, "Graphics Processing wit (Spring, 1992) pp. 169-174.	h the 88110 RISC Microproce	ssor," IEEE COMPCOM,				
	L-13	ILLIAC IV: Systems Characteristics and	Programming Manual, May I	, 1972, p. 1-78.				
	L-14	N. Abel et al., ILLIAC IV Doc. No. 233, Level Language for ILLIAV IV, August		a Fortran-Like Higher				
	L-15 ILLIAC IV Quarterly Progress Report: October, November, December 1969; Published January 15, 1970, pp. 1-15.							
٤٢'،	L-16	N.E. Abel et al., Extensions to Fortran fo	or Array Processing (1970) pp.	1-16.				
E	ú (EXAMINER	3/3/06 DATE C	ONSIDERED				

INFO	CIT	ATION DISCLOSURE FATION IN AN PPLICATION	ATTY. DOCKET NO. 043876-0147	SERIAL NO. 10/705,946			
			APPLICANT HANSEN, C., et al.				
		(PTO-1449)	FILING DATE November 13, 2003	GROUP 2183			
EXAMINER'S		OTHER ART (Include Include name of the author (in CAPITAL LETTERS	ling Author, Title, Date, Pertinent Pages, E 6), title of the article (when appropriate), ti				
INITIALS	CITE NO.	journal, serial, symposium, catalog, etc.), date, par published.	ge(s), volume-issue number(s), publisher,	city and/or country where			
{(,	L-17	Morris A, Knapp et al.ILLIAC IV Syst "Bulk Storage Applications in the ILLI		nming Manual (1972)			
	L-18	Rohrbacher, Donald, et al., "Image Pro Computer, Vol. 10, No. 8, pp 54-59 (A					
	L-19	Siegel, Howard Jay, "Interconnection I No. 6, (June, 1979) (reprinted version		IEEE Computer, Vol. 12,			
	L-20	Mike Chastain, et. al., "The Convex Ca 1988, p. 321-329.	240 Architecture", Conference o	f Supercomputing, IEEE			
	L-21	Gwennap, Linley, "New PA-RISC Pro- New Instructions to Eliminate Decoder 16-17.					
	L-22	Patrick Knebel et al., "HP's PA7100L0 (1993), pp. 441-447.	C: A Low-Cost Superscalar PAR	ISC Processor," IEEE			
	L-23	Kurpanek et al., "PA7200: A PA-RISC Interface," EEEE (1994), pp. 375-82.	Processor with Integrated High	Performance MP Bus			
	L-24	Hewlett Packard, PA-RISC 1.1 Archite 1994, pp. 1-424.	ecture and Instruction Set Refere	nce Manual, 3rd ed. Feb.			
	L-25	Margaret Simmons, et. al "A Performa 2600, NEC SX-3, and Cray Y-MP",. 19		computers – Fujitsu VP-			
	L-26		Smith, J. E., "Dynamic Instruction Scheduling and the Astronautics ZS-1," Computer, Vol. 22, No. 7, July 1989, at 21-35 and/or the Astronautics ZS-1 computers made used, and/or sold in the United States, pp. 159-173.				
	Nikhil et al., "T: A Multithreaded Massively Parallel Architecture" Computation Structures Group Memo 325-2 (March 5, 1992), pp. 1-13.						
£(·	L-28	Undy, et al., "A Low-Cost Graphics an (1994).	d Multimedia Workstation Chip	Set," IEEE pp. 10-22			
	o ruí	EXAMINER	3/3/06 DATE CO	DNSIDERED			

INFORMATION DISCLOSURE CITATION IN AN APPLICATION			ATTY. DOCKET NO. 043876-0147	SERIAL NO. 10/705,946			
			APPLICANT HANSEN, C., et al.				
		(PTO-1449)	FILING DATE November 13, 2003	GROUP 2183			
<u> </u>		OTHER ART (Includia	ng Author, Title, Date, Pertinent Pages,	Etc.)			
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS) journal, serial, symposium, catalog, etc.), date, page published.					
{(,	L-29	Feng, Tse-Yun, "Data Manipulating Full Implementations," IEEE Transactions oversion pp. 89-98.					
	L-30	Lawrie, Duncan H., "Access and Alignr on Computers, Vol. c-24, No. 12, Decer		ssor," IEEE Transactions			
	L-31	Broomell, George, et al., "Classification Switching Topologies," Computing Sur					
	L-32	Jain, Vijay, K., "Square-Root, Reciproc Image Processing," IEEEICASSP'94 A					
	L-33		Spaderna et al., "An Integrated Floating Point Vector Processor for DSP and Scientific Computing", 1989 IEEE, ICCD, October 1989 p. 8-13.				
	L-34	Gwennap, Linley, "Digital, MIPS Add I 18, 1996 pp. 24-28.	Multimedia Extensions," Micro	design Resources Nov.			
	L-35	Toyokura, M., "A Video DSP with a Me Pipeline Architecture for MPEG2 COD Signal Processors, Paper WP 4.5, 1994	EC," ISSCC94, Section 4, Vide				
	L-36	Ide, et al., "A 320-MFLOPS CMOS Flo Nobuhiro Ide, et. Al. IEEE Tokyo Secti					
	L-37	Papadopoulos et al., "*T: Integrated Bu 824- and p. 625-63.5	ilding Blocks for Parallel Com	puting," ACM (1993) p.			
	L-38	Ruby B. Lee, "Accelerating Multimedia 1995 p. 22-32.	with Enhanced Microprocesso	ors," IEEE Micro April			
	L-39	Ruby B. Lee, "Realtime MPEG Video \ IEEE (1995), pp. 186-190.	/ia Software Decompression or	n a PA-RISC Processor,"			
	L-40	K. Diefendorff, M. Allen, The Motorol April 1992, p. 157-162.	a 88110 Superscalar RISC Mic	roprocessor, IEEE Micro,			
E(C	L-41	MFLOPS Single Chip Vector Processin	Kristen Davidson, Declaration of Kristen Davidson, p. 1 and H. Takahashi et al., A 289 MFLOPS Single Chip Vector Processing Unit, The Institute of Electronics, Information, and Communication Engineers Technical Research Report, 5/28/92, pp. 17-22.				
	Pui	EXAMINER	3/3/06 DATE C	ONSIDERED			

INFORMATION DISCLOSURE CITATION IN AN APPLICATION			ATTY. DOCKET NO. 043876-0147	SERIAL NO. 10/705,946				
			APPLICANT HANSEN, C., et al.					
		(PTO-1449)	FILING DATE November 13, 2003	GROUP 2183				
		OTHER ART (Inclu	ding Author, Title, Date, Pertinent Pages, E	itc.)				
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTER journal, serial, symposium, catalog, etc.), date, papublished.	(S), title of the article (when appropriate), tit age(s), volume-issue number(s), publisher,	de of the item (book, magazine, city and/or country where				
66	Kristen Davidson, Declaration of Kristen Davidson, p. 1 and M. Kimura et al., Development of Ginicro 32-bit Family of Microprocessors, Fujitsu Semiconductor Special Part 2, Vol. 43, No. 2, February 1992.							
	L-43	Bit Manipulator," IBM Technical Dis https://www.delphion.com/tdbs/tdb?o		4, pp 1576-1576				
	L-44	Unpack and Pack in Floating Point," I	"Using a Common Barrel Shifter for Operand Normalization, Operand Alignment and Operand Unpack and Pack in Floating Point," IBM Technical Disclosure Bulletin, July, 1986, p. 699-701 https://www.delphion.com/tdbs/tdb?order=86A+61578.					
	L-45	Motorola MC88110 Second Generation	on RISC Microprocessor User's N	Manual (1991).				
	L-46	Berkerele, Michael J., "Overview of the 1993, p. 148-1 56.	he START (*T) Multithreaded Co	omputer" IEEE January				
	L-47	Diefendorff, et al., "Organization of the IEEE Micro April, 1992, p.39-63;	ne Motorola 88110 Superscalar R	ISC Microprocessor'				
	L-48	Barnes, et al., The ILLIAC IV Compu August 1968.	tter, IEEE Transactions on Comp	uters, vol. C-17, no. 8,				
	L-49	Ruby B. Lee et al., Real-Time Softwa 100LC Processors, Hewlett-Packard J		timedia-Enhanced PA 7				
	L-50	Ruby B. Lee, "Realtime MPEG Video IEEE 1995, p.186-192.	Via Software Decompression or	a PA-RISC Processor,"				
	L-51	"The Multimedia Video Processor (M Applications," Robert J. Gove, IEEE		vanced DSP				
	L-52	Convex Assembly Language Reference	ce Manual, First Ed., December 1	991.				
4.	Convex Architecture Reference Manual (C Series), Sixth Edition, Convex Computer Corporation (April 1992).							
l /	cui a	EXAMINER	3/3/06 DATE CO	ONSIDERED				

				<u> </u>		
INFO	DRM/	ATION DISCLOSURE	ATTY. DOCKET NO.	SERIAL NO.		
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			HANSEN, C., et al.			
	•	(DTO 1440)	FILING DATE	GROUP		
		(PTO-1449)	November 13, 2003	2183		
<u> </u>	1	OTHER ART (Includir	ng Author, Title, Date, Pertinent Pages, I	i		
EXAMINER'S	 	Include name of the author (in CAPITAL LETTERS)				
INITIALS	CITE NO.	journal, serial, symposium, catalog, etc.), date, page published.	e(s), volume-issue number(s), publisher,	city and/or country where		
	L-54	Manferdelli, et al., "Signal Processing A	spects of the S-1 Multiprocess	or Project," submitted to		
((SPIE Annual International Technical Sy	mposium, Sm Diego, Society			
1 (1,		Instrumentation Engineers, July 30, 198	0, p. 1-8.	,		
	L-55	Paul Michael Farmwald, Ph.D. "On the	Design of High-Performance I	Digital Arithmetic Units,"		
		Thesis, August 1981, p. 1-95.				
	L-56	GsAs Supercomputer Vendors Hit Hard	.,	91, pp. 32.		
	L-57	Convex Adds GaAs System, Electronic	•			
	L-58	Kevin Wadleigh et al., High-Performand Supercomputer, Journal of Super Comp				
<u> </u>	L-59					
	1.58	Peter Michielse, "Programming the Con Computing, First Intl Workshop, PARA				
	L-60	Ryne, Robert D., "Advanced Computers	s and Simulation," Los Alamos	National Laboratory		
1		IEEE 1 993, p. 3229-3233.				
	L-61	Singh et al., "A Programmable HIPPI In	terface for a Graphics Superco	mputer," ACM (1993) p.		
		124-132.				
	L-62	Bell, Gordon, "Ultracomputers: A Teraf	lop Before its Time," Comm.'s	of the ACM Aug. 1992		
		pp. 27-47.				
	L-63	Geist, G. A., "Cluster Computing: The		e National Laboratory,		
		84OR2 1400 May 30, 1994, p. 236-246.				
	L-64	Vetter et al., "Network Supercomputing				
	L-65	Renwick, John K." Building a Practical	HIPPI LAN," IEEE 1992, p. 3.	55-360.		
	L-68	Tenbrink, et al., "HIPPI: The First Stand Science 1994 p. 1-4.	lard for High-Performance Net	working," Los Alamos		
	L-87	Arnould et al., "The Design of Nectar: A Network Backplane for Heterogeneous Multicomputers," ACM 1989 p. 1-12.				
	Watkins, John, et al., "A Memory Controller with an Integrated Graphics Processor," IEEE 19 p 324-336.					
EC	L-69	"Control Data 6400/6500/ 6600 Comput	er Systems, Instant SMM Mair	ntenance Manual.		
) .	ø EXAMINER	7 // DATE CO	ONSIDERED		
E	uí le	D EXAMINER	5/3/06			

INFO	CIT	ATION DISCLOSURE FATION IN AN PPLICATION	ATTY. DOCKET NO. 043876-0147	SERIAL NO. 10/705,946
			APPLICANT HANSEN, C., et al.	
		(PTO-1449)	FILING DATE November 13, 2003	GROUP 2183
			ng Author, Title, Date, Pertinent Pages, F	
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), journal, serial, symposium, catalog, etc.), date, page published.		
<i>EJ</i> ,	L-70	"Control Data 6400/6500/ 6600 Comput	er Systems, SCOPE Reference	Manual, September1966.
1	L-71	"Control Data 6400/6500/ 6600 Comput	er Systems, COMPASS Refere	ence Manual, 1969.
	L-72	Tolmie, Don, "Gigabit LAN Issues: HIP Laboratory Rep. No. LA-UR 94-3994 (1		Los Alamos National
	L-73	ILLIAC IV: Systems Characteristics and	Programming Manual, May 1	1, 1972.
	L-74	1979 Annual Report: The S-1 Project Vo	ol. 1 Architecture 1979.	
	L-75	1979 Annual Report: The S-1 Project Vo	ol.2 Hardware 1979.	
	L-76	S-1 Uniprocessor Architecture, April 21, Architecture (SMA-4), Steven Cornell;	, 1983 (UCID 19782) See also	S-1 Uniprocessor
	L-77	Broughton, et al., The S-1 Project: Top-I Applications, October 24, 1985.	End Computer Systems for Na	tional Security
	L-78	Convex Data Sheet C4/XA High Perform Corporation.	nance Programming Environm	ent, Convex Computer
	L-79	Bowers et al., "Development of a Low-C System," Hewlett-Packard J. Apr. 1995 p		user Business Server
	L-80	Mick Bass et al., "The PA 7100LC MicroCompetitive Environment Hewlett-Packa		Design Decisions in a
	L-81	Mick Bass, et. al. "Design Methodologie Journal April 1995 p. 23-35.	s for the PA 7100LC Micropro	ocessor", Hewlett Packard
	L-82	Wang, Chin-Liang, "Bit-Level Systolic A Transactions on Computers, Vol. 43, No		in GF (2Am)," IEEE
	L-83	Markstein, P.W., "Computation of Eleme Processor," IBM J. Res. Develop., Vol. 3		
	L-84	Donovan, Walt, et al., "Pixel Processing Applications, January, 1995 p. 51-61.	in a Memory Controller," IEE	E Computer Graphics and
	L-85	Ware et al., 64 Bit Monolithic Floating P Vol. Sc-17, No. 5, October 1982, pp. 898		Of Solid-state Circuits,
€,(-	L-86	Hwang, "Advanced Computer Architectuat 475, p. 898-907.	ure: Parallelism, Scalability, Pr	rogrammability" (1 993)
(24,	EXAMINER	3/3/06 DATE CO	ONSIDERED

[&]quot;EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

IN		CIT	TION DISCLOSURE ATION IN AN PPLICATION	ATTY. DOCKET NO. 043876-0147	SERIAL NO. 10/705,946			
				APPLICANT HANSEN, C., et al.				
		((PTO-1449)	FILING DATE November 13, 2003	GROUP 2183			
			OTHER ART (Including	g Author, Title, Date, Pertinent Pages, E	Etc.)			
EXAMINER INITIALS	S CI	ITE IO.	Include name of the author (in CAPITAL LETTERS), journal, serial, symposium, catalog, etc.), date, page published.					
<i>(</i> _(·	L-	-87	Hwang & Degroot, "Parallel Processing					
	L-	-88	Nienhaus, Harry A., "A Fast Square Roo Techniques," IEEE Proceedings Southea		d Table Lookup			
	L-	-89	Eisig, David, et al., "The Design of a 64-171-178.	-Bit Integer Multiplier/Divider	Unit," IEEE 1993 pp			
	Į,	90	Margulis, Neal, "i860 Microprocessor A	rchitecture," Intel Corporation	1990.			
	L-	91	Intel Corporation, 3860 XP Microproces	sor Data Book" (May 1991).				
	` [.	92	Hewlett-Packard, "HP 9000 Series 700 V (System)" January 1 994.	Hewlett-Packard, "HP 9000 Series 700 Workstations Technical Reference Manual Model 712 (System)" January 1 994.				
	L	93	Ruby Lee, et al., Pathlength Reduction F p. 129-135.	eatures in the PA-RISC Archit	tecture Feb. 24-28, 1992			
	Į.	94	Kevin Wadleigh et al., High Performance Supercomputer, Poster, Conference on S					
	į.	95	Fields, Scott, "Hunting for Wasted Comp Puts Idle PC's to Work," Univ. of Wisco		or Computing Networks			
	L-	96	Litzkow et al., "Condor - A Hunter of Id	le Workstations," IEEE (1 988) p. 104-111.			
	L	97	Gregory Wilson, The History of the Develorshistory/Parallel.html, p. 1-38.	elopment of Parallel Computir	g" http://ei.cs.vt.edu/-			
	FE	98	Marsha Jovanovic and Kimberly Claffy, Collaboration" "Network Behavior" San 11 [http://www.sdsc.edu/Publications/SR	Diego Supercomputer Center				
	L-I	99	National Science Foundation (NSF) [ww	w.itrd.gov/pubs/blue94/section	n.4.2.html] 1994.			
	L-1	100	Intel Corporation, "Paragon User's Guide	e" (Oct. 1993).				
€.(Turcotte, Louis H., "A Survey of Software Environments for Exploiting Networked Computing Resources" Engineering Research Center for Computational Field Simulation June 11, 1993, p. 1-150.							
	Eui	4	EXAMINER	3/3/06 DATE CO	ONSIDERED			

INF	CI	ATION DISCLOSURE FATION IN AN PPLICATION	ATTY. DOCKET NO. 043876-0147	SERIAL NO. 10/705,946			
			APPLICANT HANSEN, C., et al.				
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EXAMINER'S INITIALS	CITE NO.	OTHER ART (Includ Include name of the author (in CAPITAL LETTERS journal, serial, symposium, catalog, etc.), date, pagpublished.	ing Author, Title, Date, Pertinent Pages, t i), title of the article (when appropriate), ti pe(s), volume-issue number(s), publisher,	tle of the item (book, magazine,			
£(.	L-102	Patterson, Barbara, "Motorola Announ Using Superscalar Chip" Motorola Cor [http://badabada.org/misc/mvme197_ar	nputer Group, p. 1-3				
	L-103	Culler, David E., et al., "Analysis Of M Multiprogramming", Report No. UCBI					
	L-104	James Laudon et al., "Architectural An Context Processors", CSL-TR-92-523,	d Implementation Tradeoffs In May 1992 p. 1-24.	The Design Of Multiple-			
	L-105	Ide, et al., "A 320-MFLOPS CMOS Flo 28 IEEE Custom Integrated Circuits Co	oating-point Processing Unit for onference, 1992, p. 30.2.1-30.2.4	Superscalar Processors,"			
	L-106	High Speed DRAMs, Special Report, I	EEE Spectrum, vol. 29, no. 10,	October 1992.			
	L-107	Moyer, Steven A., "Access Ordering A December 18, 1992.	lgorithms for a Multicopy Mem	ory," IPC-TR-92-0 1 3,			
	L-108	Moyer, Steven A., "Access Ordering an University of Virginia, April 5, 1993.	nd Effective Memory Bandwidth	n," Ph.D. dissertation,			
	L-109	"Hardware Support for Dynamic Acces McKee, Computer Science Report No.		ne Design Options", Sally			
	L-110	McGee et al., "Design of a Processor B 462-465.	us Interface ASIC for the Stream	n Memory Controller" p.			
	L-111	McKee et al., "Experimental Implemen 1-10.	tation of Dynamic Access Order	ring ," August 1, 1993, p.			
	L-112	McKee et al., Increasing Memory Band 93-34 August 1, 1993, p.1-18.	width for Vector Computations	, Technical Report CS-			
	L-113		Sally A. McKee et al., "Access Order and Memory-Conscious Cache Utilization" Computer Science Report No. CS-94- 10, March 1, 1994, p.1-17.				
EL.	L-114	McKee, et. al., "Bounds on Memory Ba Report CS-95-32, March 1, 1995.	indwidth in Streamed Computat	ions," Computer Science			
E	u C	EXAMINER	3/3/06 DATE CO	DNSIDERED			

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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INI	CIT	ATION DISCLOSURE FATION IN AN PPLICATION	ATTY. DOCKET NO. 043876-0147	SERIAL NO. 10/705,946
			APPLICANT HANSEN, C., et al.	
		(PTO-1449)	FILING DATE November 13, 2003	GROUP 2183
		OTHER ART (Includin	ng Author, Title, Date, Pertinent Pages, E	tc.)
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS) journal, serial, symposium, catalog, etc.), date, page published.		
{(·	L-115	McKee, Sally A., "Maximizing Memory Dissertation Presented to the Faculty of University of Virginia, May 1995.		
	L-116	A Systematic Approach to Optimizing a Landon, et. Al., Computer Science Rep		
	L-117	"Control Data 6400/6500/ 6600 Computative:/led-thelen.org/comp-hist/CDC-660		
	L-118	"Where now for Media processors?", N	ick Flaherty, Electronics Times	, August 24, 1998.
	L-119	George H. Barnes et al., The ILLIAC IV August 1968.	Computer ¹ , ¹ IEEE Trans., C-	17 vol. 8, pp. 746-757,
	L-120	J.E. Thornton, Design of a Computer - 7	The Control Data 6600 (1970).	
	L-121	Gerry Kane, PA-RISC 2.0 Architecture' 13-182734-0, p. 6-1—6-26.	', Chp. 6 Instruction Set Overvi	iew, Prentice Hall isbn 0-
	L-122	Cosoroaba, A.B., "Synchronous DRAM Microelectronics, Southcod95 May 709		y system design," Fujitsu
	L-123	Intel 450KX/GX PCIset, Inetel Corpora	tion, 1996	
	L-124	Baland, Granito, Marcotte, Messina, Sm IBM System Journal, January, 1967, pp.		odel 91 : Storage System"
	L-125	File History of U.S. Patent Application	No. 08/340,740 (filed November	er 16, 1994).
	L-126	File history of U.S. Patent Application N	No. 07/663,314 (filed March 1,	1991).
	L-127	S.S. Reddi et. al. "A Conceptual Framev Vol. 8, No. 2, June 1976.	work for Computer Architecture	e" Computing Surveys,
ζ (,	L-128	Yulun Wang, et al, "The 3DP: A process January 1992, p. 25-36.	sor Architecture for Three-Dim	ensional Applications,
4	in G	EXAMINER	3/3/06 DATE C	ONSIDERED

IN	FORM	ATION DISCLOSURE	ATTY. DOCKET NO.	SERIAL NO.		
11.			043876-0147	10/705,946		
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			HANSEN, C., et al.			
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		OTHER ART (Includir	ng Author, Title, Date, Pertinent Pages, E	Etc.)		
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INITIALS	. 0,,,	journal, serial, symposium, catalog, etc.), date, page	e(s), volume-issue number(s), publisher,	city and/or country where		
	NO.	published.				
00	L-12	9 "IEEE Draft Standard for High-Bandwin	dth Memory Interface Based or	SCI Signaling		
61		Technology (RamLink)", 1995, pp.1-10				
,,	L-13		ISC Architecture" 1992, Publis	her: Prentice-Hall Inc., A		
\		Simon & Shuster Company, Upper Sade				
	L-13	1 CATHY MAY et al."The Power PC Are	chitecture: A Specification For	A New Family of Risc		
		Processors" Second Edition May 1994,	pp. 1-518, Morgan Kaufmann	Publishers, Inc. San		
		Francisco CA, IBM International Busine	ess Machines, Inc.			
	L-13	2 "IEEE Standard for Scalable Coherent I	nterface (SCI)", Published by	the Institute of Electrical		
		and Electronics Engineers, Inc. August	2, 2003, pp. 1-248.			
	L-13	3 DON TOLMIE and Don Flanagan, "HII	PPI: It's Not Just for Supercom	puters Anymore" Data		
		Communications published May 8, 1993	5.			
	L-13	6 IEEE Draft Standard for "High-Bandwid	dth Memory Interface Based or	SCI		
.		Signaling Technology (RamLink)", IEE	E Standards Department, Draft	epartment, Draft 1.25		
		IEEE P1596.4-199X May 1995.				
	L-13		processor User's Manual Secon	d Edition"1994 MIPS		
		Technologies, Inc. pp. 1-754.				
	L-13					
		Corrected Preliminary Invalidity Conter				
		No. 2:04-CV-120(TJW), U.S. District C				
	L-13	1 0,	g Global Caches and Dataflow	Architecture, Proceedings		
 		of the ISCA 1992.	1.14.100.1000			
		O Saturn Architecture Specification, publi				
	L-14	-	Technical Marketing presentat	ion dated November 11,		
		1993 and February 4, 1994.				
		2 Convex 3400 Supercomputer System O				
	L-14			arallel Architectures,		
		IEEE Proceedings published September				
	L-14		ritten Opinion dated March 11,	2005, corresponding to		
		PCT/US04/22126				
EC	L-14		t dated March 18, 2005, corresp	onding to Application		
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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

(Suppl.)INFORMATION DISCLOSURE CITATION IN AN APPLICATION				ATTY. DOCKET NO. 43876-147		SERIAL NO C ntinua 10/436,34	in fS	erial No.		
					APPLICANT Craig HANSEN, et	al.				
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				U.S. PATENT	T DOCUMENTS				 	
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INITIALS	CITE NO.				Name of Patentee or Applicant of Cited Pages, Columns, Line Relevant Passages or Figures Appea		es or Relevant			
٤		US	4,814,976	3/21/1989	Craig C. Hansen,	et al				
	Ī	US	5,996,057	11/30/1999	Hunter L. Scales, III	<u> </u>				
	<u> </u>	US	6,041,404	3/21/2000	Patrice Roussel, e					
	<u> </u>	US	6,052,769	4/18/2000	Thomas R. Huff, e					
<u> </u>	-	US	6,173,393 B1 6,275,834 B1	1/9/2001 8/14/2001	Salvador Palanca,	-				
8 C	 	US	0,2/3,004 01	0/14/2001	Derrick Chu Lin, e	et ai				
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			U.S. PATENT I	DOCUMENTS	_
Examiner C Initials*		Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
40	AA	US-4,852,098	07/25/1989	Brechard, et al.	
	AB	US-4,875,161	10/17/1989	Lahti, et al.	
	AC	US-4,949,294	08/14/1990	Wambergue, et al.	
	AD	US-4,953,073	08/28/1990	Moussouris, et al.	
	AE	US-4,959,779	09/25/1990	Weber, et al.	
- 1	AF	US-5,081,698	01/14/1992	Kohn	· · ·
	AG	US-5,113,506	05/12/1992	Moussouris, et al.	
	AH	US-5,155,816	10/13/1992	Kohn	
	Al	US-5,161,247	11/03/1992	Murakami, et al.	
	AJ	US-5,179,651	01/12/1993	Taaffe, et al.	
	AK	US-5,231,646	07/27/1993	Heath, et al.	
	AL	US-5,233,690	08/03/1993	Sherlock, et al.	
	АМ	US-5,241,636	08/31/1993	Kohn	
	AN	US-5,280,598	01/18/1994	Osaki, et al.	
	AO	US-5,487,024	01/23/1996	Girardeau, Jr.	
	AP	US-5,515,520	05/07/1996	Hatta, et al.	
	AQ	US-5,533,185	07/02/1996	Lentz, et al.	
	AR	US-5,590,365	12/31/1996	lde, et al.	
ĘC,	AS	US-5,600,814	02/04/1997	Gahan, et al.	

		FO	REIGN PATENT DO	CUMENTS		
Examiner	Cite	Foreign Patent Document				Τ°
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		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	
Examiner Cit Initials* No		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T ²
<u>,e(-</u>	ΑÜ	IEEE Draft Standard for "Scalable Coherent Interface-Low-Voltage Differential Signal Specifications and Packet Encoding", IEEE Standards Department, P1596.3/D0.15 (Mar. 1992) (50006DOC018530 - 563)	
	AV	IEEE Draft Standard for "High-Bandwidth Memory Interface Based on SCI Signaling Technology (RamLink)," IEEE Standards Department, Draft 1.25 IEEE P1596.4-199X (May 1995) (50006DOC018413 – 529)	
\neg	AW	Gerry Kane et al., "MIPS RISC Architecture," Prentice Hall (1995) (50006DOC018576 -848)	1
	AX	IBM, "The PowerPC Architecture: A Specification For A New Family of RISC Processors," 2nd Ed., Morgan Kaufmann Publishers, Inc., (1994) (50006DOC019229 – 767)	T
	AY	Hewlett-Packard Co., "PA-RISC 1.1 Architecture and Instruction Set," Manual Part No. 09740-90039, (1990) (50006DOC018849 – 19228)	
	AZ	MIPS Computer Systems, Inc., "MIPS R4000 User's Manual," Mfg. Part No. M8-00040, (1990) (50006DOC017026 – 621)	
	BA	i860™ Microprocessor Architecture, Neal Margulis, Foreword by Les Kohn	
	BB	Gove, "The MVP: A Highly-Integrated Video Compression Chip," IEEE Data Compression Conference, pp. 215-24 (March 1994) (51056DOC000891 – 900)	Π
	BC	Gove, "The Multimedia Video Processor (MVP): A Chip Architecture for Advanced DSP Applications," IEEE DSP Workshop, pp. 27-30 (October 2-5, 1994) (51056DOC015452 – 455)	
	BD	Guttag et al., "A Single-Chip Multiprocessor for Multimedia: The MVP," IEEE Computer Graphics & Applications, pp. 53-64 (November 1992) (51056DOC000913 – 924)	
	BE	Lee et al., "MediaStation 5000: Integrating Video and Audio," IEEE Multimedia pp. 50-61 (Summer 1994) (51056DOC000901 – 912)	
	BF	TMS320C80 (MVP) Parallel Processor User's Guide, Texas Instruments (March 1995) (51056DOC003744 – 4437)	
	BG	TMS320C80 (MVP) Master Processor User's Guide, Texas Instruments (March 1995) (51056DOC000925 - 957)	
	ВН	Bass et al., "The PA 7100LC Microprocessor: A Case Study of IC Design Decisions in a Competitive Environment," Hewlett-Packard Journal, Vol. 46, No. 2, pp. 12-22 (April 1995) (51056DOC059283 – 289)	
	BI	Bowers et al., "Development of a Low-Cost, High Performance, Multiuser Business Server System," Hewlett-Packard Journal, Vol. 46, No. 2, p. 79 (April 1995) (51056DOC059277 – 282)	
	BJ	Gwennap, "New PA-RISC Processor Decodes MPEG Video: Hewlett-Packard's PA-7100LC Uses New Instructions to Eliminate Decoder Chip," Microprocessor Report, pp. 16-17 (January 24, 1994) (51056DOC002140 - 141)	
	BK	Gwennap, "Digital MIPS Add Multimedia Extensions," Microdesign Resources, pp. 24-28 (November 18, 1996) (51056DOC003454 – 459)	Γ
	BL	Kurpanek et al., "PA7200: A PA-RISC Processor with Integrated High Performance MP Bus Interface," IEEE COMPCON '94, pp. 375-82 (February 28- March 4, 1994) (51056DOC002149 - 156)	
	ВМ	Lee et al., "Pathlength Reduction Features in the PA-RISC Architecture," IEEE COMPCON, pp. 129-35 (February 24-28, 1992) (51056DOC068161 – 167)	Π
£t.	BN	Lee et al., "Real-Time Software MPEG Video Decoder on Multimedia-Enhanced PA 7100LC Processors," Hewlett-Packard Journal, Vol. 46, No. 2, pp. 60-68 (April 1995) (51056DOC013549 - 557)	

				
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			U.S. PATENT I	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
E()	во	US-5,636,351	06/03/1997	Lee	
	BP	US-5,721,892	02/24/1998	Peleg, et al.	
	BQ	US-5,734,874	03/31/1998	Van Hook, et al.	
	BR	US-5,758,176	05/26/1998	Agarwal, et al.	
	BS	US-5,768,546	06/16/1998	Kwon	
	BT	US-5,887,183	03/23/1999	Agarwal, et al.	
	BU	US-5,996,057	11/30/1999	Scales III, et al.	-
J	BV	US-6,425,073	07/23/2002	Roussel, et al.	•
٤(BW	US-6,516,406	02/04/2003	Peleg, et al.	
	·		-		

		FO	REIGN PATENT DO	CUMENTS	-	
	Cite	Foreign Patent Document				Τ ⁶
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		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T²
£(,	BX	Lee, "Realtime MPEG Video via Software Decompression on a PA-RISC Processor," IEEE, pp. 186-92 (1995) (51056DOC007345 – 351)	
	BY	Martin, "An Integrated Graphics Accelerator for a Low-Cost Multimedia Workstation," Hewlett-Packard Journal, Vol. 46, No. 2, pp. 43-50 (April 1995) (51056DOC072083 – 090)	
	BZ	Undy et al., "A Low-Cost Graphics and Multimedia Workstation Chip Set," IEEE Micro, pp. 10-22 (April 1994) (51056DOC002578 – 590)	
	CA	HP 9000 Series 700 Workstations Technical Reference Manual: Model 712, Hewlett-Packard (January 1994) (51056DOC068048 - 141)	
	СВ	PA-RISC 1.1 Architecture and Instruction Set Reference Manual, Third Edition, Hewlett-Packard (February 1994) (51056DOC002157 – 176)	
	CC	Ang, "StarT Next Generation: Integrating Global Caches and Dataflow Architecture," Proceedings of the ISCA 1992 Dataflow Workshop (1992) (51056DOC071743 - 776)	
	CD	Beckerle, "Overview of the StarT (*T) Multithreaded Computer," IEEE COMPCON '93, pp. 148-56 (February 22-26, 1993) (51056DOC002511 - 519)	
	CE	Diefendorff et al., "The Motorola 88110 Superscalar RISC Microprocessor," IEEE pp. 157-62 (1992) (51056DOC008746 – 751)	
	CF	Gipper, "Designing Systems for Flexibility, Functionality, and Performance with the 88110 Symmetric Superscalar Microprocessor," IEEE (1992) (51056DOC008758 – 763)	
	CG	Nikhil et al., "*T: A Multithreaded Massively Parallel Architecture," Computation Structures Group Memo 325-2, Laboratory for Computer Science, Massachusetts Institute of Technology (March 5, 1992) (51056DOC002464 – 476)	
	СН	Papadopoulos et al., "*T: Integrated Building Blocks for Parallel Computing," ACM, pp. 624-35 (1993) (51056DOC007278 – 289)	
	CI	Patterson, "Motorola Announces First High Performance Single Board Computer Using Superscalar Chip," Motorola Computer Group (Sept. 1992) (51056DOC069260 – 262)	
	Cl	M. Phillip, "Performance Issues for 88110 RISC Microprocessor," IEEE, 1992 (51056DOC008752 - 757)	
	CK	M. Smotherman et al., "Instruction Scheduling for the Motorola 88110," IEEE, 1993 (51056DOC008784 - 789)	1
	CL	R. Mueller, "The MC88110 Instruction Sequencer," Northcon, 1992 (51056DOC009735 - 738)	Τ
	CM	J. Arends, "88110: Memory System and Bus Interface," Northcon, 1992 (51056DOC009739 - 742)	Τ
	CN	K. Pepe, "The MC88110's High Performance Load/Store Unit," Northcon, 1992 (51056DOC009743 - 747)	Γ
	CO	J. Maguire, "MC88110: Datpath," Northcon, 1992 (51056DOC010059 - 063)	
	СР	Abel et al., "Extensions to FORTRAN for Array Processing," ILLIAC IV Document No. 235, Department of Computer Science, University of Illinois at Urbana-Champaign (September 1, 1970) (51056DOC001630 – 646)	
	CQ	Barnes et al., "The ILLIAC IV Computer," IEEE Transactions on Computers, Vol. C-17, No. 8, pp. 746-57 (August 1968) (51056DOC012650 – 661)	
	CR	Knapp et al., "Bulk Storage Applications in the ILLIAC IV System," ILLIAC IV Document No. 250, Center for Advanced Computation, University of Illinois at Urbana-Champaign (August 3, 1971) (51056DOC001647 – 656)	
	CS	Awaga et al., "The µVP 64-bit Vector Coprocessor: A New Implementation of High-Performance Numerical Computation," IEEE Micro, Vol. 13, No. 5, pp. 24-36 (October 1993) (51056DOC011921 – 934)	
€(,	СТ	Takahashi et al., "A 289 MFLOPS Single Chip Vector Processing Unit," The Institute of Electronics, Information, and Communication Engineers Technical Research Report, pp. 17-22 (May 28, 1992) (51056DOC009798 – 812)	

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Substitute	for form	1449B/PTO	Application Number	10/705,946						
IN	FOR	MATION DISCLOSURE	Filing Date	November 13, 2003						
- S T	ГАТЕ	EMENT BY APPLICANT	First Named Inventor	Craig C. HANSEN, et al.						
			Group Art Unit	2183						
	(use	as many sheets as necessary)	Examiner Name	CHAN, EDDIE P						
Sheet	5	of 10	Attorney Docket Number	43876-147						
		OTHER PRIOR ART NON PA	TENT LITERATURE DOC	UMENTS						
		Include name of the author (in CAPITAL	LETTERS), title of the article (when	appropriate) title of the	T					
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1(.	CU	Uchiyama et al., "The Gmicro/500 Superscalar I	chiyama et al., "The Gmicro/500 Superscalar Microprocessor with Branch Buffers," IEEE Micro (October							
- 4	077	1993) (51056DOC000185 – 194)			—					
	CV	Broughton et al., "The S-1 Project: Top-End Co. 1985) (51056DOC057368 – 607)	mputer Systems for National Sec	urity Applications," (October 24,						
	CW Farmwald et al., "Signal Processing Aspects of the S-1 Multiprocessor Project," SPIE Vol. 241, Real-Time Sign									
	Processing (1980) (51056DOC072280 - 291) CX Farmwald, "High Bandwidth Evaluation of Elementary Functions," IEEE Proceedings, 5th Syn									
	СХ	Computer Arithmetic (1981) (51056DOC07102)		dings, 5th Symposium on	1					
	CY	Gilbert, "An Investigation of the Partitioning of	Algorithms Across an MIMD Co	omputing System," (February						
	67	1980) (51056DOC072244 – 279) Widdoes, "The S-1 Project: Developing High-Pe	orformana Dicital Commuters 7	IFFF Community Consider	<u> </u>					
1	CZ	COMPCON Spring 1980 (December 11, 1979) (IEEE Computer Society	}					
	DA	Cornell, S-1 Uniprocessor Architecture SMA-4		J						
	DB	The S-1 Project, January 1985, S-1 Technical St	<u> </u>	1	l					
	DC	S-1 Architecture and Assembler SMA-4 Manual 918)	, December 19, 1979 (Prelimina	ry Version) (51056DOC057608 –						
	DD	Michielse, "Performing the Convex Exemplar Se First Intl Workshop, PARA '94, pp. 375-82 (Jun	eries SPP System," Proceedings e 20-23, 1994) (51056DOC0207	of Parallel Scientific Computing, 54 - 758)						
	DE	Wadleigh et al., "High Performance FFT Algorit on Supercomputing, Washington, D.C. (Novemb	hms for the Convex C4/XA Sup	ercomputer," Poster, Conference						
	DF	C4 Technical Overview (September 23, 1993) (5	1056DOC017111 - 157)							
	DG	Saturn Assembly Level Performance Tuning Gu		C017369 - 376)						
	DH	Saturn Differences from C Series (February 6, 19			<u> </u>					
	DI	"Convex Adds GaAs System," Electronic News Convex Architecture Reference Manual, Sixth E			ļ					
	DJ DK	Convex Assembly Language Reference Manual,								
-	DL	Convex Data Sheet C4/XA Systems, Convex Co		·	 -					
_	DM	Saturn Overview (November 12, 1993) (51056D		009250 - 250)						
	DN	Convex Notebook containing various "Machine		94 – 7510)						
	DO	"Convex C4/XA Offer 1 GFLOPS from GaAs Uniprocessor," Computergram International, June 15, 1994 (51056DOC019383)								
DP Excerpt from Convex C4600 Assembly Language Manual, 1995 (51056DOC061441 - 443)										
	DQ	Excerpt from "Advanced Computer Architecture C4/XA System" (51056DOC061453 – 459)	s - A Design Space Approach,"	Chapter 14.8, "The Convex						
	DR	Convex C4600 Assembly Language Manual, Fir	st Edition, May 1995 (51056DO	C064728 – 5299)						
€(.	DS	Alvarez et al., "A 450MHz PowerPC Microproce ISSCC (February 1999) (51056DOC071393 - 39		Set and Copper Interconnect,"						

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İ					Group Art Unit	2183			
(use as r	nany she	ets as necessary	<i>ı</i>)		Examiner Name	CHAN, EDDIE P			
Sheet		6	of	10	Attorney Docket Number	43876-147			
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	1	Inc	lude na	me of the author (in CAPI	FAL LETTERS), title of the article (who	en appropriate) title of the			
Examiner Initials*	Cite No. 1			publisher,	symposium, catalog, etc), date, page(s), city and/or country where published.		T ²		
66	DT	(51056DOC071035 - 042)							
	DU	AltiVec™ Technology Programming Environments Manual (1998) (51056DOC071043 - 392)							
	DV	Atkins, "Perform (5156DOC0706			essor," IEEE Micro, pp. 24-27, 72-	78 (October 1991)			
	DW			Processor with 3-D Gra 989) (5156DOC07071)	aphics Capabilities," NCGA '89 Co	onference Proceedings Vol. I, pp.			
	DX	Grimes et al., "	The Int	el i860 64-Bit Processo	r: A General-Purpose CPU with 3D I (July 1989) (5156DOC070701 – 1				
 	DY				ocessor," 1989 IEEE International S		 		
	<u> </u>	Digest of Technical Papers, pp. 54-55, 290 (February 15, 1989) (51056DOC072091 - 094)							
	DZ	Kohn et al., "A New Microprocessor with Vector Processing Capabilities," Electro/89 Conference Record, pp. 1-6 (April 11-13, 1989) (5156DOC070672 – 678)							
	EA	(5156DOC0706	27 - 6	42)	Microprocessor," IEEE Micro, pp.		·		
	EB	336)			Microprocessor," AMC, pp. 450-				
	EC	5156DOC06997	71 – 70	626)	" Intel Corporation (1990) (51056L				
	ED	Mittal et al., "M (\$156DOC0706			Overview," Intel Technology Jour	nal Q3 '97, pp. 1-12 (1997)			
	EE	Patel et al., "Are 90 (1989) (5156	chitecti	ral Features of the i860	- Microprocessor RISC Core and	On-Chip Caches," IEEE, pp. 385-			
	EF		The Bu	Interface and Paging I	Jnits of the i860 Microprocessor,"	IEEE, pp. 380-84 (1989)	ļ .		
	EG				pp. 22-28 (April 1989) (5156DOC	2070648 – 654)	\vdash		
	ЕН		0 MFL	OPS Floating-Point Eng	gine in the Intel i860 Processor," IE				
	EI				poration (May 1991) (51056DOC0	67266 – 427)	\vdash		
	EJ	Paragon User's	Guide,	Intel Corporation (Octo	ober 1993) (51056DOC068802 - 9	097)			
	EK				April 29, 1991 (50781DOC000001	•			
	EL				1 October 17, 1990 (51056DOC01)	,			
	EM				December 14, 1990 (50781DOC)				
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	EP				2.0, dated September 21, 1990 (510		 		
	EQ	(MU0013276 –	283 an	d 51057DOC001825 - 8					
ર્લ્ડ,	ER	Moussouris et a 630)	l., "Arc	hitecture of a Broadbar	nd MediaProcessor," Microprocesso	or Forum (1995) (MU0048611 –			

Examiner Signature	Ein bl	Dated Considered	/y/	56

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Complete if Known Substitute for form 1449B/PTO **Application Number** 10/705,946 INFORMATION DISCLOSURE Filing Date November 13, 2003 First Named Inventor Craig C. HANSEN, et al. STATEMENT BY APPLICANT Group Art Unit 2183 (use as many sheets as necessary) Examiner Name CHAN, EDDIE P 10 Attorney Docket Number 43876-147 Sheet of

	T	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the	7		
Examiner Initials*	Cite No.1	item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.			
4.	ES	Amould et al., "The Design of Nectar: A Network Backplane for Heterogeneous Multicomputers," ACM (1989) (51056DOC020947 – 958)			
	ET	Bell, "Ultracomputers: A Teraflop Before Its Time," Communications of the ACM, (August 1992) pp. 27-47 (51056DOC020903 – 923)			
	EU	Broomell et al., "Classification Categories and Historical Development of Circuit Switching Topologies," Computing Surveys, Vol. 15, No. 2, pp 95-133 (June 1983) (51056DOC003002 – 040)			
	EV	Culler et al., "Analysis of Multithreaded Microprocessors Under Multiprogramming," Report No. UCB/CSD 92/687 (May 1992) (51056DOC069283 – 300)			
	EW	Donovan et al., "Pixel Processing in a Memory Controller," IEEE Computer Graphics and Applications, pp. 51-61 (January 1995) (51056DOC059635 – 645)			
	EX	Fields, "Hunting for Wasted Computing Power: New Software for Computing Networks Puts Idle PC's to Work," Univ. of Wisconsin-Madison, http://www.cs.wisc.edu/condor/doc/WiscIdea.html (1993) (51056DOC068704 - 711)			
	EY	Geist, "Cluster Computing: The Wave of the Future?," Oak Ridge National Laboratory, 84OR21400 (May 30, 1994) (51056DOC020924 – 929)			
	EZ	Ghafoor, "Systolic Architecture for Finite Field Exponentiation," IEEE Proceedings, Vol. 136 (November 1989) (51056DOC071700 - 705)			
	FA	Giloi, "Parallel Programming Models and their Interdependence with Parallel Architectures," IEEE Proceedings (September 1993) (51056DOC071792 - 801)			
	FB	Hwang et al., "Parallel Processing for Supercomputers and Artificial Intelligence," (1993) (51056DOC059663 – 673)	T		
1	FC	Hwang, "Advanced Computer Architecture: Parallelism, Scalability, Programmability," (1993) (51056DOC059656 - 662)			
	FD	Hwang, "Computer Architecture and Parallel Processing," McGraw Hill (1984) (51056DOC070166 - 1028)	✝		
	FE	Iwaki, "Architecture of a High Speed Reed-Solomon Decoder," IEEE Consumer Electronics (January 1994) (51056DOC071687 - 694)			
	FF	Jain et al., "Square-Root, Reciprocal, SINE/COSINE, ARCTANGENT Cell for Signal and Image Processing," IEEE ICASSP '94, pp. II-521 – II-524 (April 1994) (51056DOC003070 – 073)			
	FG	Laudon et al., "Architectural and Implementation Tradeoffs in the Design of Multiple-Context Processors," Technical Report: CSL-TR-92-523 (May 1992) (51056DOC069301 – 327)			
T	FH	Lawrie, "Access and Alignment of Data in an Array Processor," IEEE Transactions on Computers, Vol. C-24, No. 12, pp. 99-109 (December 1975) (51056DOC002932 – 942)			
	FI	Le-Ngoc, "A Gate-Array-Based Programmable Reed-Solomon Codec: Structure-Implementation-Applications," IEEE Military Communications (1990) (51056DOC071695 - 699)			
	FJ	Litzkow et al., "Condor - A Hunter of Idle Workstations," IEEE (1988) (51056DOC068712 - 719)	1		
	FK	Markstein, "Computation of Elementary Functions on the IBM RISC System/6000 Processor," IBM J. Res. Develop., Vol. 34, No. 1, pp 111-19 (January 1990) (51056DOC059620 – 628)			
	FL	Nienhaus, "A Fast Square Rooter Combining Algorithmic and Table Lookup Techniques," IEEE Proceedings Southeastcon, pp. 1103-05 (1989) (51056DOC061469 – 471)			
Ē.C.	FM	Renwick, "Building a Practical HIPPI LAN," IEEE, pp. 355-60 (1992) (51056DOC020937 - 942)	T		

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				Group Art Unit	2183		
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Sheet	8	of	10	Attorney Docket Number	43876-147		

	,	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
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El	FN	Rohrbacher et al., "Image Processing with the Staran Parallel Computer," IEEE Computer, Vol. 10, No. 8, pp. 54-59 (August 1977) (reprinted version pp. 119-124) (51056DOC002943 – 948)						
1	FO	Ryne, "Advanced Computers and Simulation," IEEE, pp. 3229-33 (1993) (51056DOC020883 - 887)	Π					
Ī	FP	FP Siegel, "Interconnection Networks for SIMD Machines," IEEE Computer, Vol. 12, No. 6 (June 1979) (r version pp. 110 118) (51056DOC002949 – 957) FQ Singh et al., "A Programmable HIPPI Interface for a Graphics Supercomputer," ACM (1993) (51056DOC002949 – 957)						
	FQ	Singh et al., "A Programmable HIPPI Interface for a Graphics Supercomputer," ACM (1993) (51056DOC020888 - 896)						
	FR	Smith, "Cache Memories," Computing Surveys, Vol. 14, No. 3 (September 1982) (51056DOC071586 - 643)						
	FS	Tenbrink et al., "HIPPI: The First Standard for High-Performance Networking," Los Alamos Science (1994) (51056DOC020943 – 946)						
	FT	Tolmie, "Gigabit LAN Issues: HIPPI, Fibre Channel, or ATM," Los Alamos National Laboratory Report No. LA-UR 94-3994 (1994) (51056DOC046599 - 609)						
	FU	Tolmie, "HIPPI: It's Not Just for Supercomputers Anymore," Data Communications (May 8, 1995) (51056DOC071802 - 809)						
	FV	Toyokura et al., "A Video DSP with a Macroblock-Level-Pipeline and a SIMD Type Vector-Pipelined Architecture for MPEG2 CODEC," ISSCC94, Section 4, Video and Communications Signal Processors, Paper WP 4.5, pp. 74-75 (1994) (51056DOC003659 – 660)						
	FW	Tullsen et al., "Simultaneous Multithreading: Maximizing On-Chip Parallelism," Proceedings of the 22nd Annual International Symposium on Computer Architecture (June 1995) (51056DOC071434 – 443)						
	FX	Turcotte, "A Survey of Software Environments for Exploiting Networked Computing Resources," Engineering Research Center for Computational Field Simulation (June 11, 1993) (51056DOC069098 – 256)						
	FY	Vetter et al., "Network Supercomputing: Connecting Cray Supercomputers with a HIPPI Network Provides Impressively High Execution Rates," IEEE Network (May 1992) (51056DOC020930 – 936)						
	FZ	Wang, "Bit-Level Systolic Array for Fast Exponentiation in GF(2m)," IEEE Transactions on Computers, Vol. 43, No. 7, pp. 838-41 (July 1994) (51056DOC059407 – 410)						
	GA	Ware et al., "64 Bit Monolithic Floating Point Processors," IEEE Journal of Solid-State Circuits, Vol. Sc-17, No. 5 (October 1982) (51056DOC059646 – 655)						
	GB	"Bit Manipulator," IBM Technical Disclosure Bulletin, pp. 1575-76 (November 1974) (51056DOC010205 - 206)						
	GC	Finney et al., "Using a Common Barrel Shifter for Operand Normalization, Operand Alignment and Operand Unpack and Pack in Floating Point," IBM Technical Disclosure Bulletin, pp. 699-701 (July 1986) (51056DOC010207 - 209)						
	GD	Data General AViiON AV500, 550, 4500 and 5500 Servers						
	GE	Jovanovic et al., "Computational Science: Advances Through Collaboration," San Diego Supercomputer Center Science Report (1993) (51056DOC068769 - 779)						
	GF	High Performance Computing and Communications: Toward a National Information Infrastructure, National Science Foundation (NSF) (1994) (51056DOC068791 - 801)						
	GG	National Coordination Office for High Performance Computing and Communications, "High Performance Computing and Communications: Foundation for America's Information Future" (1996) (51056DOC072102 – 243)						
ξ'(.	GH	Wilson, "The History of the Development of Parallel Computing," http://ei.cs.vt.edu/~history/Parallel.html (51056DOC068720 - 757)						

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		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
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£(;	GI	IEEE Standard 754 (ANSI/IEEE Std. 754-1985) (51056DOC019304 - 323)	
		Original Complaint for Patent Infringement, MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed March 26, 2004	
	GJ	Amended Complaint for Patent Infringement, MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/Wa/ Dell Computer and Intel Corporation; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed April 20, 2004	
	GK	Expert Witness Report of Richard A. Killworth, Esq., MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed September 12, 2005	
	GL	Declaration and Expert Witness Report of Ray Mercer Regarding Written Description and Enablement Issues, MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/lk/a/ Dell Computer and Intel Corporation; C.A. NO. 2- 04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed September 12, 2005	
	GM	Corrected Expert Report of Dr. Stephen B. Wicker Regarding Invalidity of U.S. Patent Nos. 5,742,840; 5,794,060; 5,764,061; 5,809,321; 6,584,482; 6,643,765; 6,725,356 and Exhibits A-1; MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed October 6, 2005	
	GN	Defendants Intel and Dell's Invalidity Contentions with Exhibits A-G; MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed September 19, 2005	
	G0	Defendants Dell Inc. and Intel Corporation's Identification of Prior Art Pursuant to 35 USC §282; MicroUnity Systems Engineering, Inc. v. Dell, Inc. filval Dell Computer and Intel Corporation; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed October 7, 2005	
	GP	Request for Inter Partes Reexamination Under 35 USC §§ 311-318 of U.S. Patent No. 6,725,356 filed on June 28, 2005	
	GQ	Deposition of Larry Mennemeier on September 22, 2005 and Exhibit 501; MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation, C.A. NO. 2-04CV-120, In the United States District Court of the Eastern District of Texas, Marshall Division	
	GR	Deposition of Leslie Kohn on September 22, 2005; MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division	
	GS	Intel Article, "Intel Announces Record Revenue of 9.96 Billion", October 18, 2005	
	GT	The New York Times Article, "Intel Posts 5% Profit Increase on Demand for Notebook Chips", October 19, 2005	
	GU	USA Today Article, "Intel's Revenue Grew 18% In Robust Quarter for Tech", October 19, 2005	
1	GV	The Wall Street Journal Article, "Intel Says Chip Demand May Slow", October 19, 2005	
41	GW	The New York Times Article, "Intel Settlement Revives A Fading Chip Designer". October 20, 2005	

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			U	J.S. PATEN	T DOCUMENTS					
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4.(1	Α	US	6,643,765	11-04-2003	Hansen et al.					
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INFO	CIT	ATION DISCI FATION IN A PPLICATION	ATTY. DOCKET NO. 43876-147	SERIAL NO. Continuation of Applic No. 10/436,340			pplication		
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(4.	<u> </u>	US 4,876,660	10/24/89	Owen et al.					
7	İ	US 4,956,801	09/11/90	Priem et al.		+		·	
		US 4,969,118	11/06/90	Montoye et al.		_			
		US 5,032,865	07/16/91	Schlunt					
	1	US 5,408,581	04/18/95	Suzuki et al.		+			
		US 5,500,811	03/19/96	Corry					
		US 5,557,724	9/17/1996	Sampat et al.					
		US 5,588,152	12/24/1996	Dapp et al.					
		US 5,640,543	6/17/1997	Farrell et al.					
	<u> </u>	US 5,757,432	5/26/1998	Dulong et al.					
<u> </u>		US 5,802,336	9/1/1998	Peleg et al.	-				
		US 5,809,292	9/15/1998	Wilkinson et al.					
		US 5,818,739	10/6/1998	Peleg et al.					
٤٠.		US 5,825,677	10/20/1998	Agarwal et al.					
a t	<u> </u>	7 mg W 37	FOREIGN PAT	ENT DOCUMENTS					
EXAMINER'S	<u> </u>	Foreign Patent Docume	ent Publication Date	Name of Patentee or	Pages, Coli	ımns, Lines	T,	anslation	
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es.		EP 0474246 A2	9/6/1991				Yes	No	
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4.0		L. Kohn et al. 'The Visual	Instruction Set (VIS) in UI	traSPARC* IEEE, 1995, 462-46	9.				
			L. Kohn et al. "The Visual Instruction Set (VIS) in UltraSPARC" IEEE. 1995. 462-469. D. Shaver. "A General-Purpose Array Processor for Seismic Processing" (Nov - Dece 1984) January - March 1998. 15th Anniversary Issue. 5-26.						
		R. Lee. "Accelerating Multimedia with Enhanced Microprocessors" IEEE Micro. April 1995, 22-32.							
		N. Margulis. *i860 Microprocessor Architecture* 1990. 8-10, 171-175, 182-183.							
A. Levinthal et al. "Parallel Computers for Graphics Applications" 1987, 193-198.									
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INFORMATION DISCLOSURE					ATTY. DOCKET NO. 43876-147 SERIAL NO. C ntinuation f Applicati						
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INITIALS	CITE NO.	Num	aber-Kind Code2 (# known)	MM-DD-YYYY	Document	Relevant Passages or Releva Figures Appear					
G (US	5,835,782	11/10/1998	Lin et al.						
		US	5,886,732	3/23/1999	Humpleman						
		US	5,922,066	7/13/1999	Cho et al.	Cho et al.			1		
		US	5,983,257	11/9/1999	Dulong et al.	Dulong et al.					
		US	6,016,538	1/18/2000	Guttag et al.	Guttag et al.					
		US	6,092,094	7/18/2000	Ireton						
		US	6,401,194 B1	6/4/2002	Nguyen et al.						
		US	4,025,772	5/24/1977	Constant						
	_	US	4,489,393	12/18/1984	Kawahara, et al.						
		US	4,701,875	10/20/1987	Konishi et al.						
		US	4,727,505	2/23/1988	Konishi et al.						
	_	US	4,893,267	1/9/1990	Alsup et al.						
		US	4,975,868	12/4/1990	Freerksen						
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INITIALS	CITE NO.	Foreign Patent Document Country Codes -Number 4 -Kind Codes (if known)		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant		Tr	anslation		
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_ ((K. Diefendorff et al. "Organization of the Motorola 88110 Superscalar RISC Microprocessor" IEEE Micro. April 1992. 40-63.									
<u>e</u> c	<u> </u>	L. Gv	vennap. "IBM Regains Per	formance Lead with	Power2" Microprocessor Report	. October	4, 1993. Vol. 7.	No. 13. 1,6-	10.		
چار		L. Gv	vennap. *IBM Creates Pov	ver PC Processors f	or AS/400" Microprocessor Repo	rt. July 31	, 1995. 15-16.				
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£.Ç.	<u> </u>	US	5,201,056	4/6/1993	Daniel et al.				
 	 	US	5,268,855	12/7/1993	Mason et al.			 -	
 	 	US	5,268,995	12/7/1993	Diefendorff et al.				
 	 	us	5,423,051	6/6/1995	Fuller et al.		_		
	 	US	5,426,600	6/20/1995	Nakagawa et al.				
 	· · ·	US	5,592,405	1/7/1997	Gove et al.				
	 	US	5,642,306	6/24/1997	Mennemeier et al.		_		
	<u> </u>	US	5,666,298	9/9/1997	Peleg et al.				
	 	US	5,669,010	9/16/1997	Duluk, Jr.				
	 	US	5,673,407	9/30/1997	Poland et al.				
	 	US	5,675,526	10/7/0997					
€0	·	US	5,680,338	10/21/1997	Peleg et al.				
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